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# Medical malpractice in contemporary Ukraine: Forensic-medical retrospective review

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#### Abstract

**Introduction:** Current medical malpractice environment in contemporary Ukraine remains predominantly unknown outside the country.

Objective: The study aims to evaluate the medical malpractice litigations in Ukraine.

**Methods**: A retrospective review of all alleged medical malpractice cases between 2007 and 2016, handled both at Ternopil Regional Bureau of Forensic Medical Examination (TRBFME) and Zhytomir Regional Bureau of Forensic Medical Examination (ZhRBFME), was performed. All officially claimed documents were analyzed. **Results**: A total of 231 alleged medical malpractice cases were investigated by forensic medical experts at TRBFME and ZhRBFME. Among 231 cases, 156 (67.5%) cases were concluded as medical errors, 56 (24.3%) were qualified as reasonable care, and only 19 (8.2%) were determined as criminal negligence. Anesthesiologists are the highest-risk medical specialists involved in claims. The top adverse medical events were diagnostic errors (74.3%), followed by mistakes made during invasive medical procedures or medical treatment (64.0%); mistakes in medical records (49.1%), and institutional errors (37.8%). The objective reasons of medical malpractice were confirmed by forensic medical experts in almost 80% of the cases. A causal relationship between the damage claimed by the patient and improper medical care was found in 36 (20.6%) cases.

**Conclusion:** The top medical specialties involved in medical malpractice allegations in contemporary Ukraine are anesthesiologists, therapeutists, obstetricians/gynecologists, pediatricians and surgeons, in the descending order of number of claims. Diagnostic errors were observed most frequently in medical malpractice cases.

Keywords: forensic medical examination, medical malpractice, medical error

Nesprávna lekárska starostlivosť v súčasnej Ukrajine: Retrospektívna súdnolekárska analýza

#### **Abstrakt**

Úvod: Dnešná situácia, čo sa týka lekárskej starostlivosti v súčasnej Ukrajine, zostáva v zahraničí väčšinou neznáma.

Cieľ. Cieľom štúdie je vyhodnotiť súdne spory týkajúce sa nesprávneho výkonu lekárskej praxe na Ukrajine. **Metódy:** Bolo vykonané retrospektívne posúdenie všetkých prípadov údajného lekárskeho zanedbania medzi 2007 a 2016 v Ternopilskom Regionálnom úrade súdnolekárskych expertíz (TRÚSLE) a v Zitomírskom Regionálnom úrade súdno-lekárskych expertíz (ZRÚSLE). Analýze boli podrobené všetky oficiálne potvrdené prípady.

Výsledky: Celkom 231 prípadov údajného lekárskeho zanedbania bolo vyšetrovaných súdnolekárskymi expertami v TRÚSLE a ŽRÚSLE. Medzi 231 prípadmi, 156 (65,5 %) prípadov bolo uzavretých ako lekárska chyba, 56 (24,3 %) bolo kvalifikovaných ako správna zdravotná starostlivosť a len 19 (8,2 %) bolo určených ako trestná nedbanlivosť. Pacienti najčastejšie žalujú anestěziologov, kvôli čomu majú anestěziologovia najvyššie riziko súdneho procesu. Medzi najviac nepriaznivé lekárske udalostí patrili diagnostické chyby (74,3 %), ktoré boli nasledované chybami počas invazívnych lekárskych postupov alebo liečby (64,0 %), chyby v lekárskych záznamoch (49,1 %) a administratívne chyby (37,8 %). Objektívne dovody lekárskej nedbanlivosti boli potvrdené súdnymi expertami v takmer 80 % prípadoch. Kauzálny nexus medzi ujmou pacienta a nevhodnou lekárskou starostlivosťou bol nájdený v 36 (20,6 %) prípadoch.

**Záver:** Zo špecialistov sa v súčasnej Ukrajine dopúšťali najčastejšie nesprávnej lekárskej starostlivosti anesteziológovia, terapeuti, gynekológovia a porodníci, pediatri a chirurgovia, v zostupnom poradí podľa počtu sťažností pacientov. Diagnostické chyby boli pozorované najčastejšie v prípadoch nesprávnej lekárskej starostlivosti.

Kľůčové slová: súdne lekárska expertíza, nesprávna lekárska starostlivosť, lekárska chyba

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#### Introduction

Modern Ukrainian state was born in Eastern Europe in 1991 and transformed significantly regarding political, economic, social and medical ssues since then. Profound changes were mplemented in public medical care as well, to the extent that previous system of health care was reconstructed and all Ukrainian hospitals were organized according to a three-tier system: primary, secondary and tertiary hospitals. Although healthcare reform brought some positive changes, the number of alleged medical malpractice cases has not decreased and very few scientific studies were done to research this problem. As of now, medical malpractice litigations have become a serious social and public health problem in contemporary Ukraine. With the implementation of a new Criminal Code of Ukraine (2001), especially Art. 140 "Unjustifiable dereliction of duty by the medical or pharmaceutical practitioner", the number of medical malpractice tigations has significantly increased. This article became very important for forensic medical examination and for the Ukrainian juridical system in general, because such unintended events following medical care and their legal correct qualification were foreseen in Ukrainian laws for the first time. The prestigious "Journal of Patient Safety" released a study in 2013 that estimated number of preventable medical errors at around 440,000 cases annually in the USA alone [1], J. James noted that about 2.4 million Americans die each year and one-sixth of those die prematurely because of lethal, preventable adverse events initiated while hospitalized [2]. Dr. Martin Makary, professor of health policy and management at Johns Hopkins University School of Medicine, found in his recent study that the present number of deaths due to medical errors is 251,454 cases per year in the USA and making them the third-leading cause of death in the country [3].

As a rule, commission forensic medical examination is responsible in Ukraine for investigation of all the alleged medical malpractice cases that is similar to Forensic Medical Appraisal Committee in Anglo-Saxon system of law. Considering recent events of oncoming rapprochement between Ukraine and the European Union, such as the European Union Parliament positive vote for visa liberalization with Ukraine, our study provides some positive insights on the needs of adaptation of Ukrainian medical care system to the one adapted by the European Union. As the ties between Ukraine and the European Union, hopefully, will continue to strengthen, more and more people will travel in and outside the country, creating the need of knowledge for citizens of countries-members of the European Union about medical care in Ukraine, as well as medical malpractice and its handling by the government, in case of emergency while travelling abroad.

To conclude, this study aims to evaluate the medical malpractice litigations in Ukraine and to research structure, occurrence and peculiarities of medical malpractice in this country.

#### Methods

A retrospective review of all the alleged medical malpractice cases between 2007 and 2016, handled both at Ternopil Regional Bureau of Forensic Medical Examination (TRBFME) and Zhytomyr Regional Bureau of Forensic Medical Examination (ZhRBFME) was performed. Each file of the patient's case consisted of the following documents: investigator's resolution, transcript of interrogation of accused medical practitioners, patient's history, laboratory tests, full list of prescribed medications, report of autopsy (autopsy findings), conclusions of the specialists from the Regional State Department of health care concerning the quality of provided treatment, report of the Commission of Forensic Medical Examination, patient's medical records, and other claimed documents. Generally speaking, each file included between 50 to 70 pages of official, properly prepared documents. The evidence present in each file was analyzed in order to reason possibility of medical malpractice, characteristics of adverse events in medical care, type of clinical specialties in the claimed cases, consequences of improper medical treatment or intervention. The results of this research are summarized and processed with the use of well-defined statistical methods.

#### Results

It was found that 231 alleged medical malpractice cases were investigated by TRBFME and ZhRBFME during the studied period and a separate forensic medical conclusion report was made in each case. In order to consider report to be legit, at least two professional qualified forensic experts were involved during investigation. Moreover, specialists from other medical fields (clinical experts) took part in the examination as well, if it was deemed necessary by the commission. Under an investigator's resolution. all these practitioners formed an expert commission and all official medical documentation concerning each medical malpractice litigation was attentively reviewed and investigated. Therefore, forensic medical commission examination provided the court with their official reports (expert conclusions) and concluded that improper medical care was revealed in majority of cases (175 (75.8 %)). According to accepted opinion in Ukraine, the notion of improper medical care or medical malpractice covers all unintended and wilful failures, omissions and defects following medical care, treatment and intervention. Considering the Anglo-Saxon system of law, all failures in the conduct of doctors can be conveniently divided into two broad types: medical negligence and

professional misconduct [4]. From the viewpoint of Ukrainian legislation, all cases of unintentional medical intervention, or lack of such, can be classified into three main groups: medical maloccurrence, professional crimes of medical practitioners, and medical errors. The explanation of the term "maloccurrence" is the same for both Anglo-Saxon and Slavonic law systems: "inspite of good medical attention and care, an individual fails to respond properly or may suffer from adverse reactions of the drug" [5]. The definition of "professional crimes of medical staff" includes inadequate medical care or medical intervention that foresees criminal liability of defendant. Gross breach of standard of medical care occurs in those cases and severe consequences for the patient can develop. This is similar to the term "criminal negligence" found in Anglo-Saxon law system. Other cases of unsuccessful medical care are normally qualified in Ukrainian law as medical errors (similar to civil negligence).

The study showed that 19 cases (8.2%) among investigated ones met unjustifiable medical care and were qualified as "crimes in medical health care provision". Unskillful activity and poor quality of medical personnel, dereliction of duties by the medical practitioners, breach of standard of care with severe consequences for the patients (fatality, grievous degree of severity) were confirmed in all of these cases. Medical errors were recognized by forensic medical expert commissions in 156 cases (67.5% of all of them), other cases (56, or 24.2%) were determined as reasonable care. Similar results were revealed by Chinese colleagues in Beijing that found medical errors in 62.4 % of alleged malpractice cases [6]. According to Sørensen B. et al., majority of deviations in medical care were committed by hospital doctors and happened during emergency medical care [7]. Primary hospitals were more likely to be sued than secondary and tertiary (65.1% of claimed cases). The percentage of medical specialties facing medical malpractice charges is shown in Table 1

Medical specialty	The number of cases, n	The percentage based on the total amount of investigated cases (%)
Anesthesiologists	72	41.1%
Therapists	49	28.0%
Obstetricians	46	26.3%
Surgeons	36	20.6%
Pediatricians	29	16.6%
Traumatologists	19	10.9%
Infectiologist	19	10.9%
Emergency doctor	18	10.3%
Neurologists	12	6.9%
Family doctors	11	6.3%
Radiologists and clinicians ultrasound	10	5.7%
Neurosurgeons	8	4.6%
Ophthalmologists	7	4.0%
Psychiatrists	5	2.9%
Oncologists	4	2.3%

**Table 1** The prevalence of malpractice among medical practitioners

**Note:** Sum of individual cases for each medical specialty exceeds the total number of cases due to the fact that single case can involve more than one medical specialty.

This study showed that Ukrainian top list of highrisk medical specialties was similar to the one found for China, but significantly deviated from the list in comparison to USA, where 19.1% of claims were neurosurgery-related, 18.9% - related to thoracic-cardiovascular surgery, 5.2% claims - in family medicine, 3.1% - in pediatrics, and 2.6% - in psychiatry [6,8,9].

The following types of mistakes were confirmed by forensic medical expert commissions: misjudgment of diagnostics (74.3% of the cases); mistakes during invasive procedures or medical treatment including medication prescription errors (64.0%); mistakes in keeping track of medical records (49.1%); institutional errors (37.8%); doctors misconduct which impinge upon their professional relationships (deontological) was determined in 21.1% of the cases. Expert commissions noted frequent simultaneous presence of two different types of mistakes (23.2%), for example, misjudgment of clinical symptoms was strongly combined with low quality and improper medical treatment. Simultaneous presence of four different types of mistakes was confirmed in 16.7% of the cases; of three mistakes - in14.3%; all five types of the defects in medical care were found in 3.6% of alleged malpractice cases. The following failures in the diagnostics were normally revealed: insufficient or incomplete clinical, laboratory and instrumental examinations; misjudgment of clinical symptoms; inadequacy of the clinical diagnosis; unskillful application or improper performance of diagnostic methods and procedures. Medical mistakes which happened during medical treatment, including medication prescription errors, included: the excess doses of medication, insufficient or excess amount of infusion, unjustified prescription of several therapeutic agents concurrently. In addition to abovementioned medical mistakes, breach of standard of care, lack of monitoring data of the patient, omission of patient's condition, unforeseen complications, etc., were detected too. The following institutional errors were observed more frequently: equipment malfunction, absence of adequate medical advisory; incorrect admission procedure of the patient to the hospital; inadequate quality control of medical care by hospital administration. Numerous mistakes in personalized records in medical documentation were found as following: the absence of hemodynamic parameters; superficial and incorrect description of the objective status, lack of informed consent of the patient, inadequate clinical diagnosis, incomplete epicrisis etc. As of now, medical records files of each patient are maintained only in paper forms, without digital storage and backups. All deontological errors were commonly

conducted because of poor quality of the medical staff, tense and inappropriate relationships between doctor and patient, as well as patient's relatives [9]. Approximately 37% of all of the studied cases included breach of standard of medical care.

Forensic medical examination confirmed objective reasons of medical malpractice in almost 80% of the cases. Among those reasons, we should emphasize the severity of the patient's condition or the presence of comorbidity (32.1% of cases); rapid duration of pathological process (21.4%); objective difficulties in the diagnostics or atypical manifistations of the disease (13.4%). The subjective reasons (ie, associated with the poor quality of the medical personnel) were detected in 8.2% of the cases. All these cases were qualified as criminal negligence. A causal relationship between the damage claimed by the patient or his family and improper medical care was found in 36 (20.6%) cases.

#### Conclusion

Current medical malpractice environment in contemporary Ukraine is unknown outside the country. The top medical specialties involved in claims most often are anesthesiologists, therapeutists, obstetricians/gynecologists, pediatricians, and surgeons. Anestesiologists are the highest-risk medical specialists in contemporary Ukraine. Diagnostic errors, improper performance of medical procedures and medication errors were observed more frequently in medical malpractice cases. The majority of the medical mistakes happened due to different objective reasons. Criminal negligence is identified in near 10% of medical malpractice cases.

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